

**AMENDMENTS TO THE SPECIFICATION**

**In the Specification:**

At page 1, lines 3-4, please amend the title as follows:

METHOD METHODS AND KIT KITS FOR IDENTIFYING FUNCTION  
FUNCTIONS OF GENE PRODUCT AND IDENTIFYING BINDING SUBSTANCE  
SUBSTANCES OF GENE PRODUCTS

At page 1, line 5, after the title, please insert the following new paragraph:

**Related Applications**

This application is a 35 U.S.C. §371 national stage filing of International Application No. PCT/JP2005/001858, filed 08 February 2005, which claims priority to Japanese Patent Application No. 2004-038647 JP, filed 16 February 2004, the entire contents of each of which is hereby incorporated by reference.

Please amend the sentence at page 3, line 33 through page 34, line 2, of the specification as follows:

For example, they include fructose-1,6-phosphate fructose-1,6-diphosphate, 6-phosphogluconate, 2,3-phosphoglycerate 2,3-diphosphoglycerate, glucose-1-phosphate, fructose-6-phosphate, glucose-6-phosphate, ribulose-5-phosphate, ribose-5-phosphate, erythrose-4-phosphate, isocitric acid, citric acid, 2-phosphoglycerate, 3-phosphoglycerate, cis-aconitic acid, phosphoenolpyruvic acid, succinic acid, fumaric acid, lactic acid, and pyruvic acid, but are not limited thereto.

Please amend the paragraph at page 4, lines 22-27 of the specification as follows:

[4] the method of [3], wherein the metabolic compound cocktail comprises a compound(s) selected from the group consisting of fructose-1,6-phosphate fructose-1,6-diphosphate, 6-phosphogluconate, 2,3-phosphoglycerate 2,3-diphosphoglycerate, glucose-1-phosphate, fructose-6-phosphate, glucose-6-phosphate, ribulose-5-phosphate, ribose-5-

phosphate, erythrose-4-phosphate, isocitric acid, citric acid, 2-phosphoglycerate, 3-phosphoglycerate, cis-aconitic acid, phosphoenolpyruvic acid, succinic acid, fumaric acid, lactic acid, and pyruvic acid;

Please amend the paragraph at page 5, lines 4-9 of the specification as follows:

[10] the kit of [9], wherein the metabolic compound cocktail comprises a compound(s) selected from the group consisting of ~~fructose-1,6-phosphate~~ fructose-1,6-diphosphate, 6-phosphogluconate, ~~2,3-phosphoglycerate~~ 2,3-diphosphoglycerate, glucose-1-phosphate, fructose-6-phosphate, glucose-6-phosphate, ribulose-5-phosphate, ribose-5-phosphate, erythrose-4-phosphate, isocitric acid, citric acid, 2-phosphoglycerate, 3-phosphoglycerate, cis-aconitic acid, phosphoenolpyruvic acid, succinic acid, fumaric acid, lactic acid, and pyruvic acid;

Please amend the sentence at page 8, lines 23-28 of the specification as follows:

Compounds comprised in a metabolic compound cocktail include ~~fructose-1,6-phosphate~~ fructose-1,6-diphosphate, 6-phosphogluconate, ~~2,3-phosphoglycerate~~ 2,3-diphosphoglycerate, glucose-1-phosphate, fructose-6-phosphate, glucose-6-phosphate, ribulose-5-phosphate, ribose-5-phosphate, erythrose-4-phosphate, isocitric acid, citric acid, 2-phosphoglycerate, 3-phosphoglycerate, cis-aconitic acid, phosphoenolpyruvic acid, succinic acid, fumaric acid, lactic acid, and pyruvic acid, but are not limited thereto.

Please amend the paragraph at page 9, lines 26-36 of the specification as follows:

As the compound cocktail, 100  $\mu$ l of HEPES buffer (5 mM, pH7.5) comprising 19 different substrate compounds involved in the glycolytic system, TCA cycle, or pentose phosphate cycle (~~fructose-1,6-phosphate~~ fructose-1,6-diphosphate (F16P), 6-phosphogluconate (6PG), ~~2,3-phosphoglycerate~~ 2,3-diphosphoglycerate (23DPG), glucose-1-phosphate (G1P), fructose-6-phosphate (F6P), glucose-6-phosphate (G6P), ribulose-5-phosphate (Ribulose5P), ribose-5-phosphate (Ribose5P), erythrose-4-phosphate (Erythrose4P), isocitric acid (iso-Citrate), citric acid (Citrate), 2-phosphoglycerate, 3-phosphoglycerate (2PG/3PG), cis-aconitic acid (cis-Aconitate), phosphoenolpyruvic acid (PEP), succinic acid (Succinate), fumaric acid (Fumarate), lactic acid (Lactate), and pyruvic acid (Pyruvate)) (100  $\mu$ M each; the final concentration is

shown in all parentheses hereafter), supplemented with NADH (500  $\mu$ M), MgSO<sub>4</sub> (10 mM), and KCl (10 mM) was used.